

## CLAIMS

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1. An image processing device comprising:  
image processing means for executing image processing to  
5 move an object;  
display means for displaying an image based on this image  
processing;  
contact input means that is movably provided and is brought  
into contact with said display means by the operation of a player,  
10 and that generates a signal for computing the contact position  
when contacting said display means;  
position computing means for computing said contact  
position based on signals from the contact input means; and  
determination means for determining whether or not a  
15 prescribed relationship is established between said contact  
position and said object display position based on the computed  
results, wherein said image processing means provides prescribed  
image processing for said object when it has been determined by  
the determination means that a prescribed relationship has been  
20 established.

2. An image processing device as defined in Claim 1,  
wherein said contact input means comprises photoreceiver means  
for obtaining the brightness data of said display means, and said  
25 position computing means computes said contact position by  
comparing the photoreception timing of said brightness data and  
the display timing of said display means.

3. An image processing device as defined in Claim 2,

wherein said display means enhances the image brightness when said contact input means is brought into contact with said display means.

5        4. An image processing device as defined in Claim 1,  
wherein said contact input means comprises switch means for  
generating contact signals indicating contact with said display  
means, and said position computing means begins processing based  
on the contact signals of said switch means.

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5. An image processing device comprising:

image processing means for executing image processing to  
move an object;

display means for displaying an image based on this image  
15 processing;

contact means that is movably provided and is brought into  
contact with said display means by the operation of a player;

input means that is located near said display means and generates a signal for computing the contact position when said

20 contact means is brought into contact with said display means;

position computing means for computing said contact  
position based on signals from the input means; and

determination means for determining whether or not a prescribed relationship is established between said contact

25 position and said object display position based on the computed results, wherein said image processing means provides prescribed image processing for said object when it has been determined by the determination means that a prescribed relationship has been established.

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6. An image processing device as defined in Claim 5,  
wherein said input means comprises a plurality of detectors for  
sensing sound or vibration when said contact means is brought  
into contact, and said position computing means computes said  
5 contact position by comparing the detection timing of said  
plurality of detectors.

7. An image processing device as defined in Claim 5,  
10 wherein said contact means comprises switch means for generating  
contact signals indicating contact with said display means, and  
said position computing means begins processing based on the  
contact signals of said switch means.

15            8.    An image processing device as defined in any of Claims  
1 through 7, wherein said determination means determines that  
said prescribed relationship has been established when said  
contact position is included within a predetermined range for  
said object.

9. A game device, comprising:  
an image processing device as defined in any of Claims 1 through 7; and  
point calculating means for awarding points when it has been  
determined by said determination means that said prescribed  
relationship has been established.

10. A game device as defined in Claim 9, wherein the display surface of said display means is inclined so that the angle between

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the perpendicular direction and the normal line of the display surface ranges from 3 to 17 degrees.

11. A game device as defined in Claim 9, wherein said  
5 display means comprises a protective cover that covers the display surface on which the images are displayed.

12. Contact input means that is movably provided and is  
brought into contact with a display means by the operation of  
10 a player, comprising:

switch means for generating contact signals during contact;  
and

photoreceiver means for obtaining the brightness data of  
said display means.

13. Contact input means as defined in Claim 12, wherein  
said switch means is a vibration switch.

14. Contact input means as defined in Claim 12, wherein  
20 said photoreceiver means comprises optical fiber for receiving the brightness data of said display means during contact, and a photodetector component for detecting the output of the optic fiber.

15. Contact input means as defined in Claim 12, comprising  
25 a buffer for softening the impact when in contact with said display means.

16. A method for image processing, comprising:

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an image processing step for executing image processing to  
move an object;

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        a display step for displaying an image based on this image
processing;

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5        a contact input step involving contact near the display means  
by the operation of a player, and the generation of a signal for  
computing the contact position when contact has been made with  
said display means;

a position computing step for computing said contact  
10 position based on signals in the contact input step; and

a determination step for determining whether or not a prescribed relationship is established between said contact position and said object display position based on the computed results, wherein said image processing step provides prescribed image processing for said object when it has been determined in the determination means that a prescribed relationship has been established.

17. A method for image processing, comprising:

20        an image processing step for executing image processing to  
      move an object;

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        a display step for displaying an image based on this image
processing;

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a contact step involving contact near the display means by  
25 the operation of a player;

an input step for generating a signal to compute the contact position when contact has been made with said display means in said contact step;

a position computing step for computing said contact

[illegible]

~~position~~ based on signals in the input step; and

a determination step for determining whether or not a prescribed relationship is established between said contact position and said object display position based on the computed results, wherein said image processing step provides prescribed image processing for said object when it has been determined in the determination means that a prescribed relationship has been established.

10 18. A recording medium on which is recorded the procedure  
by which a method for image processing as defined in Claim 16  
or 17 is executed by a processing device.

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